What is claimed is:

1. A ZnO based compound semiconductor light emitting device comprising:

a silicon substrate;

a silicon nitride film formed on the surface of said silicon substrate; and

a semiconductor layer lamination in which layers are laminated to form a light emitting layer, said layers having at least an n-type layer and a p-type layer which are formed on said silicon nitride film and also which are made of a ZnO based compound semiconductor.

2. The semiconductor light emitting device of claim 1, wherein the surface of said silicon nitride film is not made amorphous but is formed to be flat face.

3. The semiconductor light emitting device of claim 1 or 2, wherein said silicon nitride film is formed to a thickness of 10 nm or less.

4. The semiconductor light emitting device of claim 1, 2, or 3, wherein said semiconductor layer lamination has a double-hetero construction in which an active layer made of $Cd_xZn_{1-x}O$ ($0 \leq x < 1$) is sandwiched by clad layers which are made of $Mg_yZn_{1-y}O$ ($0 \leq y < 1$) and also which have a band gap energy larger than that of said active layer.

5. A method for manufacturing a semiconductor light emitting device comprising the steps of:

forming a silicon nitride film on a surface of a silicon substrate by conducting heat treatment said silicon

substrate in an atmosphere containing nitrogen; and

growing on said silicon nitride film a semiconductor layer lamination to form a light emitting layer which is made of a ZnO based compound semiconductor.

6. The method of claim 5, wherein the step of forming said silicon nitride film is conducted by controlling a temperature or a time thereof so that the surface of said silicon nitride film can maintain the flat face of said silicon substrate.

7. A device having a ZnO based compound layer, comprising:

a sapphire substrate having a main face that is perpendicular to a C-face thereof; and

a ZnO based compound layer which is epitaxially grown on said main face of said sapphire substrate.

8. The device of claim 7, wherein said main face of said sapphire substrate is an A-face.

9. A method for growing a ZnO based compound crystal layer, wherein a ZnO based compound layer is grown epitaxially on a sapphire substrate so that a c-axis of said ZnO based compound layer may be perpendicular to a c-axis of said sapphire substrate.

10. A ZnO based compound semiconductor light emitting device comprising:

a sapphire substrate having a main face that is perpendicular to a C-face thereof; and

a semiconductor layer lamination in which layers are

laminated to form a light emitting layer, said layers having at least an n-type layer and a p-type layer which are made of a ZnO based compound semiconductor grown epitaxially on said main face of said sapphire substrate.

11. The semiconductor light emitting device of claim 10, wherein said main face of said sapphire substrate is an A-face.

12. The semiconductor light emitting device of claim 10 or 11, wherein said semiconductor layer lamination has a double-hetero construction in which an active layer made of $Cd_xZn_{1-x}O$ ($0 \leq x < 1$) is sandwiched by clad layers which are made of $Mg_yZn_{1-y}O$ ($0 \leq y < \pm 1$) and also which has a band gap energy larger than that of said active layer.